AMENDMENTS TO THE CLAIMS:

Please amend claims as follows:

1. (currently amended) A displacement device with a first part ~~(1)~~ and a second part ~~(2)~~ which are displaceable relative to one another in at least an X-direction and a Y-direction perpendicular thereto, wherein the first part comprises a carrier ~~(5)~~ which extends substantially parallel to the X-direction and the Y-direction and on which a system ~~(3)~~ of magnets is fastened in a pattern of rows ~~(7)~~ extending parallel to the X-direction and columns ~~(8)~~ extending parallel to the Y-direction, wherein an equal distance is present each time between the rows and between the columns, wherein in each row ~~(7)~~ and in each column ~~(8)~~ magnets of a first kind (N) with a magnetization direction perpendicular to the carrier ~~(5)~~ and directed to the second part ~~(2)~~ and magnets of a second kind (Z) with a magnetization direction perpendicular to the carrier ~~(5)~~ and directed away from the second part ~~(2)~~ are positioned in alternation, and wherein a magnet of a third kind (H) with a magnetization direction directed from a magnet of the second kind (Z) to the magnet of the first kind (N) is arranged between the magnets of the first (N) and the second kind (Z), while the second part ~~(2)~~ is provided with a system ~~(4)~~ of electric coils with at least one electric coil of a first kind (C1), with current conductors ~~(9)~~ situated in a magnetic field of the system of magnets and enclosing an angle of substantially 45° with the X-direction, and with at least one electric coil of a second kind (C2), also with current conductors ~~(10)~~ situated in the magnetic field of the system of magnets and enclosing an angle of substantially 45° with the X-direction but directed perpendicular to the current conductors ~~(9)~~ of the first electric coil (C1), characterized in that the displacement device is provided with a number of sensors sensitive to magnetic fields, which sensors supply a signal which is dependent on the local mutual positions of the ~~permanent~~ magnets of the first part relative to the electric coils of the second part in ~~the~~ a region where these two parts overlap, the first part and the second part being independently movable relative to each other.

2. (currently amended) A displacement device as claimed in claim 1, characterized in that the sensors sensitive to magnetic fields are present in ~~that part of said two parts in which the coil systems are situated~~ in the second part.

3. (currently amended) A displacement device as claimed in claim 1 ~~or 2~~, characterized in that the sensors sensitive to magnetic fields comprise Hall sensors.

4. (original) A displacement device as claimed in claim 3, characterized in that the sensors sensitive to magnetic fields comprise one or several linear arrays of individual Hall sensors which are situated at regular distances to one another.

5. (currently amended) A displacement device as claimed in claim 4, characterized in that

- the magnets of the first (N) and the second kind (Z) ~~are of an identical~~ have a square shape with equal sides ~~(13)~~, and the magnets of the third kind (H) have an oblong shape with both longer and shorter sides ~~(12, 14)~~, the longer sides ~~(12)~~ of a magnet of the third kind (H) adjoining the equal sides ~~(13)~~ of a magnet of the first (N) and the second kind (Z) and ~~being equally long as~~ having a length matching the equal sides ~~(13)~~ of the magnets of the first and second kinds, while the ratio of the length of the shorter side ~~(14)~~ of a magnet of the third kind (H) to the length of the longer side ~~(12)~~ lies between 0.25 and 0.59, and
- the distance between the centers of the outermost Hall sensors of a linear array is equal to $2n \times p$, with $n \in \{1, 2, 3, ...\}$, and p is the pole pitch of poles of equal orientation of the permanent magnets in a diagonal direction in the XY-plane at an angle of –45° or +45° to the X-direction and the Y-direction.

6. (original) A displacement device as claimed in claim 5, characterized in that the linear arrays present at least comprise a first linear array in a first diagonal direction and a second linear array in a second diagonal direction perpendicular to the first.

7. (original) A displacement device as claimed in claim 6, characterized in that the first linear array belongs to a system of two arrays of the same orientation situated next to one another at a mutual distance of $1/2p + n \times p$, and the second linear array belongs to a system of two arrays of equal orientation situated next to one another at a mutual distance of $1/2p + n \times p$, with $n \in \{1, 2, 3, ...\}$.

8. (currently amended) A displacement device as claimed in claim 7, characterized in that a third system of linear arrays is present at a distance from and in the extended direction of ~~one of said two other~~ the first or second linear arrays.

9. (currently amended) A displacement device as claimed in claim 7, characterized in that ~~the~~ a vertical distance between the first and the second part can be determined from amplitudes of signals of the sensors of two arrays which belong to one another.

10. (currently amended) A displacement device as claimed in claim 4, characterized in that

- the electric coils are of an approximately rectangular shape and as a result have mutually opposed parallel straight sides,
- the electric coils of each coil system are arranged such that their corresponding sides are positioned parallel to one another, and
- each linear array is arranged in a position parallel to a side of the immediately adjacent electric coil ~~and at equal distances to the ends of said side~~ so as to be equidistant from each end of said side.

11. (original) A displacement device as claimed in claim 4, characterized in that the individual Hall sensors of each array are connected to an input of a summation amplifier via respective individual differential amplifiers.

12. (newly added) A displacement device as claimed in claim 1, characterized in that the sensors sensitive to magnetic fields have two or more directions in which they are sensitive to magnetic fields.

13. (newly added) A displacement device with a first part and a second part which are displaceable relative to one another in at least an X-direction and a Y-direction perpendicular thereto, wherein the first part comprises a carrier which extends substantially parallel to the X-direction and the Y-direction and on which a system of magnets is fastened in a pattern of rows extending parallel to the X-direction and columns extending parallel to the Y-direction, wherein an equal distance is present each time between the rows and between the columns, wherein in each row and in each column magnets of a first kind (N) with a magnetization direction perpendicular to the carrier and directed to the second part and magnets of a second kind (Z) with a magnetization direction perpendicular to the carrier and directed away from the second part are positioned in alternation, and wherein a magnet of a third kind (H) with a magnetization direction directed from a magnet of the second kind (Z) to the magnet of the first kind (N) is arranged between the magnets of the first (N) and the second kind (Z), while the second part is provided with a system of electric coils with at least one electric coil of a first kind (C1), with current conductors situated in a magnetic field of the system of magnets and enclosing an angle of substantially 45° with the X-direction, and with at least one electric coil of a second kind (C2), also with current conductors

situated in the magnetic field of the system of magnets and enclosing an angle of substantially 45° with the X-direction but directed perpendicular to the current conductors of the first electric coil (C1), characterized in that the displacement device is provided with a number of sensors sensitive to magnetic fields, which sensors have two directions in which they are sensitive to magnetic fields and which supply a signal which is dependent on the local mutual positions of one or more magnets of the first part relative to the electric coils of the second part in a region where these two parts overlap.

14. (newly added) A method of design for a displacement device comprising the steps of:

configuring a displacement device so as to include a carrier having a system of magnets thereon and a first and second coil suitable for being levitated above said system of magnets and directed to any position in the X-Y plane above the system of magnets independently of one another; and

providing said displacement device with a number of sensors sensitive to magnetic fields, said sensors being suitable for supplying a signal which is dependent on local mutual positions of said system of magnets relative to said first and second coils in an overlapping region.